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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,114	11/17/2003	Yoshiaki Hamano	117785	9759

25944 7590 11/03/2006

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EXAMINER	
LEE, CYNTHIA K	
ART UNIT	**PAPER NUMBER**
1745	

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/713,114	HAMANO ET AL.	
	Examiner	Art Unit	
	Cynthia Lee	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *6-13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/3/04,11/17/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Election/Restrictions

Applicant's election with traverse of Group I claims 1-5 and 14 in the reply filed on 9/7/2006 is acknowledged. The traversal is on the ground(s) that there is a sufficient interrelationship between the two groups of claims to warrant examination in a single application and that a complete search would cover all the claims and thus there would be no undue burden on the patent office in examining all the claims in a single application.

In response, to provide evidence of undue burden on the Examiner, MPEP 808.02 states that for related but distinct inventions, undue burden exist if one or more of the following can be shown: A) separate classification, b) separate status in the art if inventions are classifiable together, or c) a different field of search is shown even if the inventions are classifiable together. The Examiner has shown in the previous restriction requirement that the two groups of invention are separately classified which meets the undue burden requirement as set forth in the MPEP.

The requirement is still deemed proper and is therefore made FINAL.

Priority

Acknowledgement has been made of applicant's claim for priority under 35 USC 119 (a-d). The certified copy has been filed on 11/17/2003.

Information Disclosure Statement

The Information Disclosure Statement (IDS) filed 6/3/2004 and 11/17/2003 has been placed in the application file and the information referred to therein has been considered.

Drawings

No drawings were filed as of the mailing of this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because the amount of oxygen in the chemical formula is indicated as "not specified." It is unclear as to which amount of oxygen the Applicants are intending to claim.

The Examiner notes that it could also mean zero oxygen, in which the positive electrode would not be a "composite oxide."

Claims depending from claims rejected under 35 USC 112, 2nd paragraph are also rejected for the same.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lampe-Onnerud (US 2002/0192552).

Lampe-Onnerud discloses a positive electrode and a lithium secondary battery. The positive electrode, both the core and the coating, contains particles of the following formula

$Li_{x1}A_{x2}Ni_{1-y1-z1}Co_{y1}B_{z1}O_a$

A is at least one element selected from barium, magnesium, calcium and strontium,

B is at least one element selected from boron, aluminum, gallium, manganese, titanium, vanadium, and zirconium,

in which $0.1< x1<1.3$ and $0.0 < x2$; y1, or z1 <0.2.

It has been held that a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See MPEP 2144.05. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists, see MPEP 2144.05.

See Abstract and [0074].

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lampe-Onnerud (US 2002/0192552) in view of Lee (US 2004/0076884).

Lampe-Onnerud discloses all the elements of claim 1 and are incorporated herein. Lampe-Onnerud discloses that the positive electrode is coated with the same substance as the core material and the coating is calcined by heating the coating and

the core material at a temperature range of between about 300 C and 500 C for about 0.2 hours to 4 hours, and then further heated to a temperature of between about 600 C and 900 C for about 0.2 hours to 12 hours [0051].

However, Lampe-Onnerud does not disclose that this material is an amorphous material. Lee teaches of coating a cathode material with aluminum oxide (Al2O3) (see abstract). Lee teaches that the modified cathode increases the charge voltage of the battery [0001] and a higher discharge specific capacity [0024]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute Lampe-Onnerud's coating for Lee's coating comprising aluminum oxide for the benefit of increasing the voltage and the capacity of the battery. Further, it has been held by the court that the selection of a known material based on its suitability for its intended use is *prima facie* obvious. Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945). Se MPEP 2144.07.

Although Lee does not expressly disclose that the aluminum oxide coating is amorphous, the Examiner notes that it is necessarily amorphous. Table 3, pg 19 of the instant specification also uses aluminum oxide for the coating material. Further, pg. 6 and Example 2 of the instant specification pg. 18 describe the formation of the amorphous phase. The amorphous phase is mixed with the cathode active material and the resulting mixture is fired and refired. The Examiner notes that modifying Lampe-Onnerud with Lee's aluminum oxide will result in the formation of the amorphous phase as claimed by the applicant. The combination of prior art references would also possess an amorphous phase within the particles because Lampe-Onnerud refires the

positive electrode. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature *is necessarily present in that which is described in the reference*. In re Robertson, 49 USPQ2d 1949 (1999).

If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show obvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Lee whose telephone number is 571-272-8699. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Trainer Susy Tsang-Foster can be reached on 571-272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ckl

Cynthia Lee

Patent Examiner

SUSY TSANG-FOSTER
PRIMARY EXAMINER